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AGRICULTURAL RESEARCH ADMINISTRATION  
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE  
WASHINGTON 25, D. C.

In Cooperation with State, Federal and other Agencies

COTTON INSECT CONDITIONS FOR WEEK ENDING AUGUST 3, 1946  
(Tenth Cotton Insect Survey Report for 1946)

Weather conditions continued favorable for weevils in 7 of the 9 leading cotton-growing States and the weevil situation remains critical in all States. Dry, hot weather reduced infestations in many areas in Texas and Oklahoma and the crop is maturing rapidly in those States. Much poisoning for weevil control is still needed to protect the late crop and bolls that have set. Applications of calcium arsenate dust should be continued during August or until the bolls have passed the weevil danger stage.

The cotton leafworm has spread throughout the principal cotton-producing areas of Texas, Louisiana and the southern half of Arkansas, extending from Ashdown in the southwestern part of the State to Memphis in the northeastern part of the State. Infestations are reported in Bolivar, Coahoma, Sharkey, Washington, and Tate Counties, Mississippi. These Delta Counties are in the extreme western and northwestern part of the State and the infestation extends to near the Tennessee line. Infestations have been found in Eddy and Chaves Counties in New Mexico and Graham County, Arizona. Stripping is occurring in many fields in south Texas and moths are numerous and undoubtedly migrating to the northern areas and other States. Some stripping in Louisiana has been reported, and much poison is being used for control in many areas.

Spotted, damaging infestations of bollworms continue over a large part of Texas with concentrations in the central part of the State. Serious bollworm infestations have been reported in several areas in Louisiana.

BOLL WEEVIL

TEXAS: Drouth and hot winds retarded growth and was detrimental to cotton in the western areas of the State. Rains badly needed in all areas, except in southeastern sections. Cotton maturing rapidly over entire State. Weevil damage reduced, except in isolated fields, but the scarcity of squares caused a slight increase in infestation. The average weevil infestation in 442 fields in 55 counties was 40%; as compared to 37% the previous week. In 46 fields no infestation was found; in 85 fields the infestation was less than 10%; in 80 fields it was from 10 to 25%; in 63 fields it was 25 to 50%; and in 168 of the fields more than 50% of the squares were punctured. In McLennan and adjoining Counties in the Blacklands Area cotton made an excellent growth and is fruiting heavily, except in spotted fields of rank-growing cotton that has not been poisoned. The average infestation in this area was 19%, as compared to 26% the previous week.

OKLAHOMA: Continued hot, dry weather reduced weevil infestation, but the scarcity of squares in many areas caused the infestation to be slightly higher this week. The average infestation in 132 fields in 14 counties was 32%, as compared to 24% the previous week. No infestation was found in 2% of the fields. In 22% of the fields the infestation was below 10%; in 25% of the fields it was from 10 to 25%; in 29% of the fields it was from 25 to 50%; and in 22% of the fields more than 50% of the squares were punctured.

LOUISIANA: Weather conditions continued favorable for weevil development throughout the State and infestations increased. The average infestation in 178 fields in 15 counties was 68% as compared to 51% the previous week. In 2% of the fields the infestation was less than 10%; in 8% of the fields it was from 10 to 25%; in 14% of the fields it was from 25 to 50%; and in 76% of the fields more than 50% of the squares were punctured. Dusting for weevil control is general and no dealer or grower has reported that he could not obtain some calcium arsenate.

ARKANSAS: The average boll weevil infestation in 64 fields in 5 counties in the southeastern part of the State was 37%. No infestation was found in 5% of the fields. In 17% of the fields the infestation was less than 10%; in 12% of the fields it was from 10 to 25%; in 38% of the fields it was from 25 to 50%; and in 28% of the fields more than 50% of the squares were punctured.

Many of the records made in Arkansas and Louisiana were made in fields which had been dusted with calcium arsenate.

MISSISSIPPI: Weather conditions were variable with showers and heavy rains over most of the State, which was favorable for weevil development and interfered with poisoning operations. Dr. Clay Lyle reported 217 fields examined in 33 counties, of which 179 were infested, with an average of 37% punctured squares. The average of all fields examined was 31%. In 40 fields examined in Tunica County in the northwestern part of the State the infestation ranged from 0 to 27% punctured squares, with the majority of the fields below 10%.

The average weevil infestation in 107 fields in 13 Delta Counties was 31%. No infestation was found in 26 of the fields. In 18 fields the infestation was less than 10%; in 20 fields it was from 10 to 25%; in 11 fields it was from 25 to 50%; and in 32 fields more than 50% of the squares were punctured. A large planting company in Bolivar County reported weevil infestation in 183 fields examined. In 36 of the fields the infestation was less than 10%; in 144 fields it was from 10 to 25%; in 29 fields it was from 25 to 50%; and in 4 of the fields more than 50% of the squares were punctured. No poisoning was done by this plantation during the week on account of weather conditions.

ALABAMA: W. A. Ruffin, Extension Entomologist, wrote on August 3: "Rains have been general during the last two weeks in all sections of the State. Farmers are applying calcium arsenate for the control of the boll weevil as far north as Jackson County. I have had a number of requests from most parts of the Tennessee Valley for information on boll weevil control. Normally this section of the State has little or no boll weevil damage."

GEORGIA: Continued mild temperatures and rains were favorable for weevils, and migratory weevils are appearing in the northern areas. The infestation remains high in the eastern counties. Cotton is now maturing rapidly in the southern counties and has passed the peak of fruiting in much of the northern areas. The average infestation in 82 fields in 27 counties was 39%. In 3 of the fields the infestation was less than 10%; in 20 fields it was from 10 to 20%; in 16 fields it was from 20 to 30%; in 10 fields it was from 30 to 40%; in 11 fields it was from 40 to 50%; and in 22 fields more than 50% of the squares were punctured.



SOUTH CAROLINA: Mild temperatures and cloudy, humid weather prevailed over the State. Heavy rains occurred in most of the cotton areas and weevils continued to increase in large numbers. The general migratory movement has not been noted and the percent of infestation has not yet reached the saturation level in most fields on account of rank growth and excessive fruiting. The average weevil infestation in 107 fields in 15 Piedmont and Upper Coastal Plain counties was 58%. All fields examined were infested. In 1% of the fields the infestation was less than 10%; in 8% of the fields it was from 10 to 25%; in 24% of the fields it was from 25 to 50%; and in 74% of the fields the infestation was more than 50% punctured squares. The average infestation ranged from 34% in York County to 70% in Kershaw County.

NORTH CAROLINA: Weather conditions continued favorable for weevil development. The average infestation in 105 fields in 15 Piedmont and Coastal Plain counties was 43%. No infestation was found in 3% of the fields. In 18% of the fields the infestation was less than 10%; in 26% of the fields it was from 10 to 25%; in 19% of the fields it was from 25 to 50%; and in 39% of the fields more than 50% of the squares were punctured. The average range of infestation was from 8% in Cleveland County to 93% in Hoke County.

VIRGINIA: The average boll weevil infestation in 15 fields in the southeastern part of the State was 9.9%. No infestation was found in 3 of the 15 fields examined. The average range of infestation was from 7% in Nansemond County to 12% in Greenville County.

#### COTTON LEAFWORM

TEXAS: The leafworm spread throughout the northern part of the State. It was found in several counties adjoining the Oklahoma line in west Texas, including several counties in the High Plains and one county adjoining New Mexico. It was also found in the El Paso Valley. They are now reported in 45 counties in the principal cotton-growing areas of the State. New infestations during the past week were found in Hudspeth, Bailey, Hockley, Terry, Lamb, Howard, Martin, Haskell, Jones, Throckmorton, Coke, Fannin, Lamar, Delta, Kaufman, Ellis, Johnson and Limestone Counties. Stripping is occurring in many fields in south Texas and moths are numerous and undoubtedly migrating in large numbers to northern areas, including other States.

LOUISIANA: Leafworms have been reported in all principal cotton-producing areas of the State. They are present in sufficient numbers in many fields to require control measures. Spotted stripping has been reported in some areas and much poisoning is being done for their control.

ARKANSAS: Dr. Lincoln, Extension Entomologist, reports as follows: "Leafworms generally distributed from Ashdown in Little River County to Memphis and south (southern half of State). Disting under way in many places. County Agent from Little River County reported by telephone that 3,000 acres would be dusted. That is one-half of the cotton in the County. The leafworm scare has caused a heavy run on calcium arsenate and dusters."

MISSISSIPPI: On July 29 Mr. Claude Romine reported cotton leafworms  $1\frac{1}{2}$  miles north of Trail Lake in Washington County. The worms were large and will begin pupating in a few days. On the same date Mr. DeWitt Walcott reported an infestation of worms on Refuge Plantation in Washington County south of Greenville. On August 5, Dr. Clay Lyle wired: "Leafworms reported in Bolivar, Coahoma, Sharkey, Washington and Tate Counties. Showers and heavy rains interfering with poisoning."

NEW MEXICO: Cotton leafworms were collected August 1, in Eddy County, 10 miles south of Artesia, and in Chaves County near Roswell August 3.

ARIZONA: Leafworms were collected near Safford August 3.

#### BOLLWORM

TEXAS: Spotted, damaging infestations of bollworms continue over a large part of Texas with concentrations in the central part of the State.

LOUISIANA: Mr. I. J. Becnel, Louisiana Experiment Station, on August 1, reported bollworm injury continues serious in Caddo and Bossier Parishes. Mr. McGregor, Extension Entomologist, reported serious damage from bollworm in St. Landry and Natchitoches Parishes.

ARKANSAS: Dr. Lincoln reports bollworm injury in Little River County in the southwestern part of the State.

MISSISSIPPI: Bollworm infestation reported in 11 Mississippi Delta Counties, but no serious damage has occurred.

#### COTTON FLEA HOPPER

On a large plantation in Coahoma County, Mississippi, 4,000 acres of cotton were dusted with 5 percent DDT dust for flea hopper and Lygus bug control, with good results. A serious infestation of flea hoppers was reported in Lee County in the northeastern part of the State. Arrangements have been made to dust for their control.

No serious damage was reported from Texas and Oklahoma.

#### COTTON APHID

TEXAS: Aphids are widespread and are causing much damage in the central part of the State, especially in fields which have been dusted with calcium arsen-

ate. In these areas many fields which have not been dusted are heavily infested.

ALABAMA: Aphids are present in injurious numbers in most all fields that have been dusted with calcium arsenate.

#### INSECTS ON IRRIGATED COTTON OF THE SOUTHWEST

ARIZONA: Hemipterous insect populations increased in most all fields that have not been dusted for insect control. In Graham and Pinal Counties heavy infestations of stinkbugs are appearing and much dusting is being done for their control. Stinkbugs are also increasing in numbers in the Salt River and Santa Cruz Valleys.

NEW MEXICO: No reports have been received on hemipterous insect populations in the Mesilla Valley but airplane dusting is under way in that area for their control. Injurious hemipterous insect populations continued low in the Pecos Valley.

TEXAS: In general the hemipterous insect populations decreased in numbers in the El Paso Valley. However, in a number of fields adjacent to seed alfalfa, populations are present in damaging numbers.

#### MISCELLANEOUS INSECTS

Webworms: No serious damage was reported from the infested areas in Oklahoma and Texas.

Red Spider: Heavy local infestations were reported in Mississippi and Greene Counties, Arkansas.

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August 7, 1946

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